

Baskakova, A.N.
GUSEVA, K.A.; BASKAKOVA, A.N.

Chemical composition of the volatile part of alcohol-soluble
extract oil from the azalea flower. Trudy VNIISNDV no.2:82-85 '54.
(MLRA 10:7)

(Azalea) (Essences and essential oils)

BASKAROVA, A.N.

GUSEVA, K.A.; BASKAROVA, A.N.

Obtaining liquid extract of rose oil. Trudy VNIISNDV no.2:158-159
'54.

(MLRA 10:7)

(Attar of roses)

2
GUSEVA, K.A.; BASKAKOVA, A.N.

Producing extraction oil from dry azalea flowers. Trudy
VNIISNDV no.4:178 '58. (MIRA 12:5)
(Essences and essential oils)
(Azalea)

BASKAKOVA, G.M.; KOPYTOVA, F.V.

Effect of aminazine on respiration in the frog. Biul. eksp. biol.
i med. 56 no.12:20-23 D '62.

(MIRA 17:11)

1. Kafedra fiziologii zhivotnykh (nauchnyy rukovoditel' - prof.
M.V. Kirzon) biologo-pochvennogo fakul'teta Moskovskogo gosudarst-
vennogo universiteta imeni M.V. Lomonosova.

BASKAKOVA, G.M.

Electrotonic potentials in spinal radicles of a frog. Dokl. AN
SSSR 162 no.1:221-224 My '65. (MIRA 18:5)

1. Moskovskiy gosudarstvennyy universitet. Submitted January 18,
1965.

BASKAKOVA, G.M.

Changes in the electrotonic potential of the posterior root following supersegmental (Sechenov's) inhibition in the frog. Dokl. AN SSSR 162 no.2:468-471 My '65. (MIRA 18:5)

1. Moskovskiy gosudarstvennyy universitet. Submitted January 18, 1965.

PEREPEL'KIN, K.Ye.; SEMENOV, Yu.P.; BASKAKOVA, G.V.

Studying the processes of swelling and washing of polyvinyl alcohol. Khim. volok. no.4:10-14 '64. (MIRA 18:4)

1. Leningradskiy filial Vsesoyuznogo nauchno-issledovatel'skogo instituta iskusstvennogo volokna (for Perepelkin). 2. Vsesoyuznyy nauchno-issledovatel'skiy institut steklyanogo volokna (for Semenov, Baskakova).

РАСКРЫТИЕ, Л.

"Intravenous injection of a non-specific serum for exhausted horses."
Konevodstvo 22, no. 9, 1952.

SIFOROV, V.I., redaktor; ~~BASKAKOVA, L.B.~~, redaktor; YAKIMENKO, L.P., redaktor; GERASIMOVA, Ye.S., tekhnicheskiiy redaktor.

[Small radio apparatus; problems of construction, production and use. Collection of articles translated from foreign periodical literature] Malogabaritnaya radioapparaturny; voprosy konstruirovaniia, proizvodstva i ekspluatatsii. Sbornik perevodov statei iz inostrannoi periodicheskoi literatury. Moskva, Izd-vo inostrannoi lit-ry, 1954. 372 p. (MIRA 8:5)

1. Chlen-korrespondent AN SSSR (for Siforov).
(Radio-Apparatus and supplies)

MARKUS, John; ALTAYEV, V.Ya., inzh.[translator]; BAYKOVSKIY, V.Ya., inzh.
[translator]; ZAYMOVSKIY, Ye.A., inzh.[translator]; KOROVYAKOV,
D.B., inzh.[translator]; MOKEYEV, O.K., inzh.[translator];
YAROSHEVSKIY, Yu.A., inzh.[translator]; IVANOV, V.A., kand. tekhn.
nauk, red.; SOKOLOV, A.A., kand. tekhn. nauk, red.; BASKAKOVA, L.B.,
red.; DZHATIYEVA, F.Kh., tekhn. red.

[Handbook of electronic control circuits] Skhemy elektronnoi avto-
matiki. Pod red. i s predisl. V.A.Ivanova i A.A.Sokolova. Mo-
skva, Izd-vo inostr. lit-ry, 1962. 342 p. Translated from the English.
(Electronic control) (Electronic circuits) (MIRA 15:12)
(Automatic control)

L 17021-66
ACC NR: AP6006349 SOURCE CODE: UR/0413/66/000/002/0074/0074

INVENTOR: Baskakova, L. G.

ORG: none

TITLE: Device for fixing sensors during electrooculograph tests.
Class 30, No. 178038

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki,
no. 2, 1966, 74

TOPIC TAGS: electrooculography, human neurophysiology, electrooculo-
graph sensor

ABSTRACT: An Author Certificate has been issued for a device for
attaching sensors during electrooculographic tests. It consists of
cylindrical electrodes, a coaxial lead which is connected to the
recording device, and straps with buckles for attaching the device to
the patient's head. To decrease the time necessary to fix the elec-
trodes in the exact interpupillary position, the device is shaped like
a mask and is made of plastic with slots for rubber inserts which hold

Card 1/2 UDC: 615.471:617.758.1

BASKAKOVA, M. I.

"The Effect of the Composition of the Medium on the Floatability of Kainite-Langbeinite Sulfates and Chlorates." Cand Tech Sci, State Scientific Res Inst of Mined Chemical Materials, Min of Chemical Industry USSR, Moscow, 1954. (KL, No 8, Feb 55)

SO: Sum. No. 631, 26 Aug 55-Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

BASKAKOVA, T. V.

"The Pathological Morphology of Acute Forms of Pasteurellosis in Calves."
Cand Vet Sci, Moscow Veterinary Acad, Min Higher Education, Moscow, 1954.
(KL, No 1, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher
Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

BASKAKOVA, V.B.; GOLOVIN, A.V.; MARTYNYUK, M.M.; SEMENCHENKO, V.K.

Calculation of the speed of sound from the isodynamic coefficients
and the determinant of the stability of a substance. Akust. zhur.
11 no.1:30-34 '65. (MIRA 18:4)

1. Moskovskiy gosudarstvennyy universitet.

SEMENCHENKO, V.K.; BASKAKOVA, V.B.

Geometric meaning of the stability determinant. Zhur. fiz. khim. 39
no.3:729-735 Mr '65. (MIRA 18:7)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.

BASKAKOVA, V.P.

Conditioned pupillary reflexes following the administration of
trimecaine. Farm. i toks. 26 no.5:515-518 S-0 '63.
(MIRA 17:8)

1. Kafedra farmakologii (zav. - prof. N.S. Shvarsalon)
Krymskogo meditsinskogo instituta.

BASKAKOVA, V.P.

Conditioned reflex reactions of the eyes following repeated
instillations of a number of pharmacological agents. Farm. i
toks. 27 no.3:265-267 My-Je '64. (MIRA 18:4)

1. Kafedra farmakologii (zav. - prof. N.S.Shvarsalon) Krymskogo
meditsinskogo instituta, Simferopol'.

BASKAKOVA, V.P. (Simferopol')

Conditioned reflex pupillary reactions to the administration of
adrenomimetic and antihistaminic substances. Vrach.delo no.1:
143-145 Ja '63. (MIRA 16:2)

1. Kafedra farmakologii (zav. - prof. N.S. Shvarsalon) Kryaskogo
meditsinskogo instituta.
(CONDITIONED RESPONSE) (PUPIL (EYE)) (DRUGS—PHYSIOLOGICAL EFFECT)

BASKAKOVA, V.P.

Effect of courses of folliculin administration on the blood serum proteins in normal and castrated rabbits. Probl. endok. i gorm. 11 no.2:85-88 Mr-Apr '65. (MIRA 18:7)

1. Kafedra farmakologii (zav. - prof. N.S.Shvarsalon) Krymskogo meditsinskogo instituta, Simferopol'.

BASKAKOVA, V.P.

Conditioned reflex changes in serum proteins under the influence of folliculin, synestrol, progesterone and testosterone propionate. Farm. i toks. 28 no.5:566-568 S-0 '65.

(MIRA 18:12)

1. Kafedra farmakologii (zav. - prof. N.S.Shvarsalon) Krymskogo meditsinskogo instituta, Simferopol'. Submitted February 4, 1964.

BASKAKOVA, Ye.

POLYANSKIY, Yu.I., professor, otvetstvennyy redaktor; PRAVDIN, I.F., professor, saslushennyy deyatel' nauki Karelo-Finskoy SSR, redaktor; SMIRNOV, A.F., kandidat biologicheskikh nauk, redaktor; BASKAKOVA, Ye., redaktor; POD'YEL'SKAYA, K., tekhnicheskiiy redaktor.

[Materials of the Conference called by the Karelian Branch of the U.S.S.R. Academy of Sciences and the Karelian section of the All-Union Scientific Research Institute of the Fish Industry of Lakes and Rivers, on the problem of increasing fish productivity in the Karelian lakes and rivers] Materialy soveshchaniia po probleme povysheniia rybnoi produktivnosti vnutrennikh vodoemov Karelo-Finskoi SSR, sozvanogo Karelo-Finskim filialom Akademii nauk SSSR i Karelo-Finskim otdeleniem VNIORKh 11-13 marta 1953 g. Petrosavodsk, Gos. izd-vo Karelo-Finskoi SSR, 1954. 194 p. [Microfilm] (MLRA 8:2)

1. Akademiya nauk SSSR, Karelo-Finskiy filial, Petrosavodsk. Institut biologii. 2. Direktor Instituta biologii Karelo-Finskogo filiala Akademii nauk SSSR (for Polyanskiy). 3. Zaveduyushchiy sektorom zoologii Instituta biologii Karelo-Finskogo filiala Akademii nauk SSSR (for Pravdin). 4. Direktor Karelo-Finskogo otdeleniya Vsesoyuznogo nauchno-issledovatel'skogo instituta ozer'nogo i rechnogo rybnogo khozyaystva (for Smirnov).
(Karelia--Fish culture)

L 15047-65 EWT(1)/EPF(c)/EPF(n)-2/EPR/T/EPA(bb)-2/EWA(1) Pr-4/PS-4/ra-4
ASD(n)-5/AFWL/AEDC(1)/AFETR/ESD(dp) W
ACCESSION NR: APS001634 S/0170/64/000/O 8/0135/0136

AUTHOR: Baskalov, A. P.

TITLE: The book by Ya. I. Asnin, "Teplovoye podobiye, konvektivnyy teploobmen i entropiya" (Thermal similarity, convective heat transfer and entropy)²¹

SOURCE: Inzhenerno-fizicheskiy zhurnal, no. 8, 1964, 133-136

TOPIC TAGS: similarity theory, differential equation, finite equation

Abstract: The author agrees with an earlier reviewer (V. P. Isachenko, Teploenergetika, No 11, 1963) that Asnin's treatment of the theory of similarity involves a typical, rather than specific, error of procedure, and that the theory of similarity may be employed only where there is a closed system of equations (differential or finite) which describe a process, from which it is necessary to obtain all the criteria which characterize the process. Since Asnin admittedly did not employ such a system, he provides a dimensionless treatment of experimental data based only on his own intuition. In similarity theory, the statement of the problem must just as mathematically complete as in the case of analytical methods. Orig. art. has 6 equations.

Card 1/2

L 15047-65

ACCESSION NR: AP5001634

ASSOCIATION: Ural'skiy filial AN SSSR, Sverdlovsk (Ural Branch, AN SSSR)

SUBMITTED: 09May64

ENCL: 00

SUB CODE: IE, MA

NO REF SOV: 000

OTHER: 000

JPRS

Card 2/2

BASKANCHIADZE, G.Sh.; YAROSLAVSKAYA, M.M.; ZELENITSKAYA, S.S.

Use of a new form of tetracycline suspension in the treatment
of scarlet fever. Antibiotiki 4 no.3:100-103 My-Je '59.
(MIRA 12:9)

1. Kafedra mikrobiologii (sav. - ohlen-korrespondent AMU
SSSR prof.Z.V.Yermol'yeva) i kafedra pediatrii (sav. - prof.
M.Ye.Sukhareva) Tsentral'nogo instituta usovershenstvovaniya
vrachey.

(TETRACYCLINE, ther. use,
scarlet fever, suspension (Rus))
(SCARLET FEVER, ther.
tetracycline suspension (Rus))

BASKANCHILADZE, G.Sh.; YAROSLAVSKAYA, M.M.

Experimental and clinical study on the new medicinal compound
"tetracycline dragee." Antibiotiki 4 no.5:99-100 S-0 '59. (MIRA 13:2)

1. Kafedra mikrobiologii (sav. - chlen-korrespondent AMN SSSR
prof. Z.V. Yermol'yeva) Tsentral'nogo instituta usovershenstvovani-
ya vrachev.

(TETRACYCLINE ther.)

BASKANCHILADZE, G. Sh. Cand Med Sci -- "Study of the effect of new tetracycline
and erythromycin preparations upon ~~the~~ hemolytic streptococcus and staphylococcus."
Mos, 1961 (2nd Mos State Med Inst im N. I. Pirogov). (KL, 4-61, 207)

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-  -

SOBOLEV, V.R.; BASKANCHILADZE, G.Sh.

Comparative studies on the absorption and distribution of new
tetracycline preparations. Antibiotiki 6 no.5:431-433 My '61.
(MIRA 14:7)

1. Kafedra mikrobiologii (zav. - chlen-korrespondent AMN SSSR prof.
Z.V.Yermol'yeva) TSentral'nogo instituta usovershenstvovaniya vrachey.
(TETRACYCLINE)

BASKANCHILADZE, G.Sh.; KLADIASHVILI, M.D.

Comparative characteristics of the sensitivity to various antibiotics of staphylococci strains freshly isolated from sick children. Antibiotiki 10 no.7:640-642 Ji '65.

(MIRA 18:9)

1. Institut pediatrii (direktor - P.A. Kurashvili) Ministerstva zdravookhraneniya Gruzinskoy SSR, Tbilisi.

ACCESSION NR: AR4018334

8/0137/64/000/001/I077/I077

SOURCE: RZh. Metallurgiya, Abs. 11484

AUTHOR: Tarnovskiy, I. Ya.; Lyashkov, V. B.; Baskashvili, V. S.; Khasin, G. A.

TITLE: Plasticity and resistance to deformation of alloyed types of steel and alloys at high temperatures

CITED SOURCE: Tr. Ural'skogo n.-i. in-ta Chern. met., v. 2, 1963, 146-152

TOPIC TAGS: alloyed steels, steel alloy, high-temperature steel testing, deformation resistance

TRANSLATION: Mechanical properties were determined during the stretching of 12 types of alloyed steel (structural, tool, and stainless) at 800-1,250 degrees. The tests took place on a 5-ton-capacity hydraulic press with a constant speed of engagement movement of 0.33 meters/sec. Heating and testing of samples took place in a tubular oven with carborundum rods. The true resistance to deformation σ_p of the steel of all tested types was lowered by 6-10 times as the temperature of heating increased, and leveled off at 1,250 degrees, reaching approximately 2 kg/mm²; for EI435 alloy and 3Kh2V8 type steel only, under these conditions, the value of σ_p

Card 1/2

ACCESSION NR: AR4018334

remained at 4 kg/mm². The highest S_p at 800-1,000 degrees was characterized by alloy EI 435 and type EI478 austenitic steel. At the same time, in the above temperature range, more intensive lowering of the value of S_p takes place in alloys and austenitic steels. For these materials, a continuous increase in plastic characteristics (ϵ and ψ) occurs with an increase in the test temperature. Pre-eutectoid types 12Kh2N4A and 5KhNT steels, in which the value of ψ changes within the range of 92-100 degrees, possess high plastic properties in the temperature range studied. With respect to 45G2, 30KhGSNA, EI 478, EK3, and 5KhNT steels, there is a steady increase in plasticity at a temperature of about 1,000 degrees. In the remainder steels studied, a "breakdown" of plasticity is observed in the 900-1,000 degree range.

SUB CODE: MM

ENCL: 00

Card 2/2

BASKAY TOTH, E., AND OTHERS.

BASKAY TOTH, E., AND OTHERS. Remarks on Professor Kund's lecture. p. 73.
Unanimous statement by participants of the
International Conference on Mechanization
of Agriculture. p. 77.
Closing words of Jeno Fock, President of the
Scientific Association of the Machine Industry.
p. 77.

Vol. 2, No. 3, Mar. 1955.
JARMUVEK MEZGAZDASAGI GEPEK.
TECHNOLOGY
Budapest, Hungary

So: East European Accession, Vol. 5, No. 5, May 1956.

SOBOLEV, V.R.; BASKANCHILADZE, G.Sh.

Comparative experimental study of erythromycin, tetracycline, and penicillin in coccal infections. Antibiotiki 6 no.3:228-231 Mr '61. (MIRA 14:5)

1. Kafedra mikrobiologii (zav. - ohlen-korrespondent AMN SSSR prof. Z.V.Yermol'yeva) Tsentral'nogo instituta usovershenstvovaniya vrachey.

(ANTIBIOTICS)

(STREPTOCOCCAL INFECTIONS)

(STAPHYLOCOCCAL INFECTIONS)

BASKAY TOTH, Bertalan, dr., egyetemi tanar

Up-to-date farming on pastures. Elet tud 17 no.43:1363-1366
28 0 '62.

BASKAYEV, Kh.K.; GOL'DFARB, M.M.; DANILOVA, V.V., red.

[Diploma project in machinery engineering schools;
methodological manual on "Metal cutting"] Diplomnoe
proektirovanie v mashinostroitel'nykh tekhnikumakh;
uchebno-metodicheskoe posobie dlia spetsial'nosti
"Obrabotka metallov rezaniem." n.p. Rosvuzizdat, 1963.
223 p. (MIRA 17:5)

Dr. Ageyenko, A.

USSR/Human and Animal Physiology - Liver.

V-8

Abs Jour : Ref Zhur - Biol., No 1, 1958, 4140

Author : I. Ageyenko, A. Baskayeva

Inst : -

Title : Influence of Ulcerative Disease of the Stomach on the Hepatic Function.

Orig Pub : In: Klinika i lecheniye zabolevaniy zheludka. Ordzhonikidze, 1956, 106-111

Abstract : The hepatic function was studied in 150 patients with an ulcer of the stomach or of the duodenum (Florence's test, hyperglycaemic curves, Kvik-Pytel' test). In 36 patients only the results of the 3 tests were abnormal; the results of 2 tests were abnormal in 62 patients, and the results of one test were abnormal in the other patients. Liver disorders were not always observed in patients with peptic ulcers. Some functional disorders were reversible when rational therapy was applied.

Card 1/1

BASKAYEVA, A. N.

Secondary blood circulation from laceration of traumatic
35511. Vtorichnoye krovotecheniye iz razryvavsheysya travmaticheskoy
anevrizmy vnutrenney chelyustnoy arterii. Trudy sev.-oset. Gos. Med.
In-ta, VYP. 4, 1949, c. 25-28.

Letopis' Zhurnal'nykh Statey, Vol. 48, Moskva, 1949

aneurysm of the external maxillary artery

BASKAYEVA, A. N.

Change of reserve alkalinity in surgical patients
35512. Izmeneniye rezervnoy shchelochnosti u operirovannykh bol'nykh.
Trudy sev.-oset. Gos. Med. In-ta, VYp. 4, 1949, c. 33-40.
Nb. Oset. Gos. Med. In-ta

Letipis' Zhurnal'nykh Statey, Vol. 48, Moskva, 1949.

BASKAYEVA, A. N.

Change of carbon anhydrase & reserve alkalinity in surgical patients
35513. Izmeneniye ugol'noy Angidrazy I Rezervnoy Shchelochnosti
Operirovannykh Bol'nykh. Trudy Sev.-Oset. Gos. Med. In-ta, VYP. 4,
1949, c. 41-45.

Letopis' Zhurnal'nykh Statey, Vol. 48, Moskva, 1949

BASKEVICH, N.I.

MOGILEVSKIY, Dmitriy Aleksandrovich, dotsent; BABKOV, Valeriy Fedorovich, prof., doktor tekhn.nauk; SMIRNOV, Andrey Sergeyevich, kand.tekhn.nauk; ABRAMOV, Leonid Tikhonovich, kand.tekhn.nauk; ZAYTSEV, Filipp Yakovlevich, kand.tekhn.nauk; ZAMAKHAYEV, Mitrofan Semenovich, kand.tekhn.nauk; NIKITIN, Sergey Mikhaylovich, inzh.; BIRULYA, A.K., prof., retsensent; DUDKIN, P.A., kand.tekhn.nauk, retsensent; AVDEYEV, V.N., retsensent; KARTASHEV, V.A., retsensent; PAL'CHEV, A.G., retsensent; POPOV, A.N., retsensent; PITTSIN, I.G., retsensent; ROMANENKO, I.A., prof., retsensent; BARATS, L.A., prepodavatel', retsensent; BASKEVICH, N.I., prepodavatel', retsensent; BEL'SKIY, A.Ye., prepodavatel', retsensent; KALUZHSKIY, Ya.A., prepodavatel', retsensent; CHVANOV, V.G., red., MAL'KOVA, N.V., tekhn.red.

[Locating and designing airfields] Izyskaniya i proektirovaniye aerodromov. Pod red. V.F.Babkova. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transporta i shosseinykh dorog RSFSR, 1959. 566 p. (MIRA 13:3)

1. Khar'kovskiy avtomobil'no-dorozhnyy institut (for Romanenko, Barats, Baskevich, Bel'skiy, Kaluzhskiy).
(Airports--Planning)

14(2)

AUTHORS:

SOV/127-59-2-11/21
Baskevich, Ya.E., Lysak, G.D., and Kovler, S.Ya.

TITLE:

A Stopping Device for Mine-Shaft Cages With Friction Pulleys (Ulavlivayushcheye ustroystvo dlya kletey shakhtnogo pod'yema so shkivami treniya)

PERIODICAL:

Gornyy zhurnal, 1959, Nr 2, p 54 (USSR)

ABSTRACT:

Author's Certificate Nr 106717, class 35a, 16⁰⁵. This is a description of a device ensuring additional safety in case the rope of a double-way shaft elevator breaks. It consists in an additional rope connecting the 2 cages, and passing, on the surface, thru 2 combined pulleys. There is 1 diagram.

Card 1/1

BASKIKH, V.P., insh.

The expediency of changing over from scale 1:2,000 to scale 1:5,000
in surveying for the grading of rice fields. Gidr. 1 mel. 12 no.10:
35-38 0 '60. (MIRA 13:11)

1. Krasnodarskiy filial "Iprovodkhoz".
(Surveying) (Irrigation) (Rice)

BASKILOVICH, I.A.; KOMISSAROV, I.G.; PASTUKHOV, Ye.T.

Mechanized clay mud processing shop in two units. Razved. i
okh. nedr 26 no. 1:53-54 Ja '60. (MIRA 13:12)

1. Trest Mosbassuglegologiya.
(Drilling fluids)

BASKILOVICH, I.A.; KOMISSAROV, I.G.; PASTUKHOV, Ye.T.

Two-unit mechanized clay plant. Biul.nauch.-tekhn.inform.VIMS
no.1:61-63 '60. (MIRA 15:5)

1. Trest "Mosbassuglageologiya".
(Clay) (Drilling fluids)

5.5310

28285
S/075/61/016/005/006/010
B117/B101

AUTHORS: Baskin, A. A., Zakharov, Ye. I., Petrov, K. I., and Rzhekhina, Ye. I.

TITLE: Spectroscopic determination of impurities in niobium

PERIODICAL: Zhurnal analiticheskoy khimii, v. 16, no. 5, 1961, 627 - 630

TEXT: The authors developed (a) a method of simultaneously determining iron, silicon, titanium, tantalum, and lead in niobium by spectrum analysis, and (b) a method of obtaining high-purity niobium pentoxide for producing standard specimens. The spectra concerned were excited in a d-c arc. Niobium pentoxide intermixed with coal dust in a ratio of 2:1 was used. The arc amperage, which was 6.5 a in the first 15 seconds of combustion, was increased to 12 a. A further increase to 15 a was found to be unsuitable because of a resulting intense background. Conditions for spectral excitation were chosen on the basis of burning-out curves determined experimentally. In the case of the impurities considered here, and when coal dust has been added, these curves display two maxima which are presumably due to carbides forming while the arc is burning. The impurities evaporate more or less completely within two minutes. The spectra were taken with a large
Card 1/4

X

Spectroscopic determination of...

28285
S/075/61/016/005/006/010
B117/B101

Hilger-type spectrograph on diapositives with a sensitivity of 0.25 GOST (GOST) units, and on "spectrometric type-1" plates with a sensitivity of 0.7 GOST units, after an exposure of 2 minutes. The slit was illuminated by a single-lens condenser. The reproducibility of determinations was improved by using internal standards. In determining silicon and iron, cobalt in a concentration of $8 \cdot 10^{-2}\%$ served as an internal standard. Titanium and tantalum were determined by a comparison with niobium lines. Analytic pairs of lines and the concentration ranges considered are presented in Table 1. Iron, silicon, titanium, and lead may be determined with a sensitivity of $1 \cdot 10^{-3}\%$, and tantalum with $3 \cdot 10^{-2}\%$. The reproducibility of individual determinations characterized by the mean square error is 10 % for tantalum and titanium, 11% for silicon, 13% for lead, and 16% for iron. The reliability of the method suggested was substantiated by an analysis of specimens containing certain admixtures. Neither the sensitivity nor the accuracy of determinations are impaired by the presence of iron, silicon, lead, and calcium in amounts up to 1%. As regards the method suggested for obtaining high-purity niobium pentoxide, the separation of niobium and tantalum is based on the different degree to which their fluoride complexes can be extracted with cyclohexanone. Niobium is separated from titanium

Card 2/4

28285

S/075/61/016/005/006/010
B117/B101

Spectroscopic determination of...

and other admixtures by converting niobic acid into ammonium peroxyntiobate $(\text{NH}_4)_3\text{NbO}_8$ with hydrogen peroxide and ammonia in the presence of Komplexon III.

Impurities remain in the solution under these conditions. It takes a four-fold extraction to remove tantalum from a solution containing 200 g of niobium. Ammonium peroxyntiobate decomposes at 70 - 72°C to form niobium pentoxide. The latter contains less than $1 \cdot 10^{-4}\%$ of tantalum and not more than $1 \cdot 10^{-3}\%$ of titanium, iron, silicon, and lead. Standard samples on the basis of niobium pentoxide are prepared by adding calculated amounts of tantalum, iron, silicon, and lead oxides, as well as cobalt oxide as an internal standard. There are 2 figures, 3 tables, and 7 references: 5 Soviet and 2 non-Soviet. The reference to the English-language publication reads as follows: Ref. 4: J. R. Varning, K. B. Higbie, J. T. Grace, D. F. Speece, H. L. Gilbert, Industr. and Engng. Chem. 46, 644 (1954).

SUBMITTED: March 11, 1960

Card 3/4

BASKIN, A.I.

GALUZINSKIY, D Ye., BASKIN, A.I., inzhener.

Remarks about excess clearances. Vest.mash. 34 no.9:36-37 8 '54.
(Pipe) (MLRA 7:9)

32984

S/641/61/000/000/011/033
B104/B102

26.2242

AUTHORS: Orlov, V. V., Golashvili, T. V., Baskin, A. I.

TITLE: Neutron resonance absorption in a lump

SOURCE: Krupchitskiy, P. A., ed. Neytronnaya fizika; sbornik statey.
Moscow, 1961, 116 - 124

TEXT: The authors develop a general formula for the effective resonance integral which takes account of the scattering and the slowing down of neutrons in a lump as well as the possibility of a neutron passing through the lump. A survey is given of the formulas of the effective resonance integral which have already been dealt with (Marchuk G. I., Chislennyye metody rascheta yadernykh reaktorov, - Numerical methods of reactor calculation - Gl. XXI. Atomizdat, 1958; Galanin A. D., Teoriya yadernykh reaktorov na teplovykh neytronakh - Theory of thermal reactors - Atomizdat; Spinrad B., Chernick J., Corngold N., lecture no. 1847, Second International Conference on the Peaceful Uses of Atomic Energy, Geneva, 1958). The authors derive Wigner's formula for the resonance integral $J_{\text{eff}} = a + b/\sqrt{l}$, ✓

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S/641/61/000/000/011/033
B104/B102

Neutron resonance ...

where a is the volume absorption, b the surface absorption, and $\langle l \rangle$ the mean free neutron path in the lump. If the resonance cross section is given by the Breit-Wigner formula $\Sigma_r(E) = \Sigma_{r0}/(1+x^2)$, $x = \frac{E-E_0}{\Gamma/2}$, where E_0 and Γ are the energy and the resonance width, respectively, the

resonance integral is given by

$$J_{\text{res}} = \frac{\pi}{2} \frac{\sigma_0 \Gamma_0}{E_0} \sqrt{\frac{\Sigma_s}{\Sigma_s^2 + \Sigma_a}} + \frac{S}{4V_{\text{eff}}} \frac{\Gamma_0}{2E_0} \int \frac{\Sigma_r^2}{[\Sigma_s(1+x^2) + \Sigma_a^2]} \times \quad (8).$$

$$\times \langle 1 - \exp \left[-\left(\Sigma_s + \frac{\Sigma_a^2}{1+x^2} \right) l \right] \rangle dx.$$

With strong resonance the quantities with $1/l$ and the potential scattering cross section, Σ_s , can be neglected against Σ_r , $\Sigma(E) = \Sigma_s + \Sigma_r(E)$ is the total macroscopic cross section. The volume absorption increases with temperature, surface absorption may decrease or increase as a function of $1/a$ and Σ_s is the power of the moderator. I. I. Gurevich and I. I.

Card 2/3

32984

Neutron resonance ...

S/641/61/000/000/011/033
B104/B102

Pomeranchuk (Reaktorstroyeniye i teoriya reaktorov. Doklady sovetskoy delegatsii na Mezhdunarodnoy konferentsii po mirnomu ispol'zovaniyu atomnoy energii. Izd-vo AN SSSR, 1955, p- 22) are mentioned. There are 2 figures and 9 references: 7 Soviet and 2 non-Soviet.

Card 3/3

BURMISTROV, P.I.; SAMOYLOVICH, S.D.; DEMICHEV, G.M.; KONONOV, V.A.;
EVENCHIK, S.D.; BRODOVSKIY, N.R.; PAVLOV, S.M.; BOBROV,
A.A.; BASKIN, A.I.; SHKOL'NIKOV, S.A.; VASIL'YEV, B.K.;
DRANNIKOV, A.B.; RIKMAN, M.A.; BURAKOV, V.A.; VLADIMIROV,
A.P.; NIKOLAYEVSKIY, G.M.; PETRUSHEV, I.M., red.;
GERASIMOVA, Ye.S., tekhn. red.

[Mechanization of loading, unloading and storing operations in industrial enterprises] Mekhanizatsiya pogruzochno-razgruzochnykh i skladskikh rabot na promyshlennykh predpriyatiyakh. Moskva, Ekonomizdat, 1963. 276 p.

(MIRA 17:2)

BELOBROV, Andrey Pavlovich. Prinimali uchastiye: BASKIN, A.S.,
inzh.-gidrograf; BOGDANOV, I.A., inzh.-gidrograf, dots.;
VIL'NER, B.A., inzh.-gidrograf; VOLKOV, P.D., inzh.-
gidrograf; GORSHKOV, N.M., inzh.-gidrograf; CHUROV, Ye.P.,
inzh.-gidrograf; YASHKEVICH, Ye.V., inzh.-gidrograf;
STUPAKOVA, L.A., red.

[Marine hydrography] Gidrografiia moria. Moskva, Trans-
port, 1964. 514 p. (MIRA 17:9)

BASKIN, B.G.

Two cycles per day in all longwalls. Ugol' Ukr. 4 no. 11:28-
29 N '60. (MIRA 13:12)

1. Glavnyy inzhener shakhty "Krasnyy partizan" trest Sverdlovugol'.
(Donets Basin--Coal mines and mining--Labor productivity)

BASKIN, B.I.; UTIN, I.A.

Experience in the mechanized build-up welding of metallurgical equipment parts. Avtom. svar. 16 no.4:67-70 Ap '63. (MIRA 16:4)

1. Azerbaydzhanskiy truboprokatnyy zavod im. V.I.Lenina.
(Pipe mills—Maintenance and repair)
(Electric welding—Equipment and supplies)

PASKIN, B.L.

Mr., Chair of Histology, Khirgiz State Medical Institute, Frunze, -1947-.

"Janus-Like Regenerative Forms in the Rainworm," Dok. Ak. 58, No. 9, 1947.

UTIN, I.A.; BASKIN, B.W.; TIMOFEEV, V.I.

Reconditioning by electric welding of large-size units and parts of metallurgical equipment. Avtom. svar. 17 no.12: 61-64 D '64 (MIRA 18:2)

1. Azerbaydzhanskiy truboprokatnyy zavod im. V.I. Lenina (for Utin, Baskin). 2. Azerbaydzhanskiy nauchno-issledovatel'skiy institut neftyanogo mashinostroyeniya (for Timofeyev).

BASKIN, E.M.; UTIN, I.A.; GONCHAROV, I.P.; PROKOPCHUK, G.P.

Reconditioning couplings of automatic pipe rolling mills.
Metallurg 10 no.5:29-30 My '65. (MIRA 18:6)

1. Azerbaydzhanskiy truboprokatnyy zavod i Khar'kovskiy
politekhnicheskiy institut.

BASKIN, G.

Wide use of articles manufactured from waste materials. Prom.
koop. no.9:28 S '57. (MIRA 10:9)

1. Tekhnoruk arteli invalidov "Promotkhody," Leningrad.
(Oaprons)

BOBROVSKIY, Viktor Iosifovich; GRIDINA, Lidiya Vasil'yevna; BASIN,
Grigoriy Samoylovich; KOBLOV, G.Ya., kand. fil. nauk, dots.,
red.; KOROTKIY, V.N., red.; TIKHONOVA, Ya.A., tekhn. red.

[A course of English for seamen] Kurs angliiskogo iazyka dlia
morskikh uchilishch. Moskva, Izd-vo "Morskoi transport,"
1962. 394 p. (MIRA 16:6)

(English language—Technical english)
(Naval art and science—Terminology)

BASKIN, I. I., SHIRYAEV, A. I.

Tobacco

Some data on qualitative rating of raw tobacco and makhorka. Tabak 13 no. 1, 1952.

9. MONTHLY LIST OF RUSSIAN ACCESSIONS, Library of Congress, June 1952. Uncl.

BASKIN, Kh. B. [translator]; SOKOLOV, I. A., redaktor; GERASIMOVA, Ye. S., tekhnicheskiiy redaktor

[International electrical equipment cartels. Translated from the English] Mezhdunarodnye karteli v elektrotekhnicheskoi promyshlennosti. Perevod s angliiskogo Kh. B. Baskina. Moskva, Izd-vo inostrannoi lit-ry, 1955. 172 p. (MIRA 9:4)

1. U.S. Federal Trade Commission.
(Electric industries)

BASKIN, K.Ye., inzh.

Are safety fuses in single-phase 35 kv. transformers necessary?
Elek. sta. 36 no.11:87-88 N '65. (MIRA 18:10)

BASKIN, M. (Professor).

Baskin, M. (Professor) - Listed as author of article, "On the So-Called 'Atomic Sociology'," a critique of the brochure, Atomnaya sotsiologiya -- ideologicheskoye oruzhiye amerikanskogo imperializma (Atomic Sociology, the Ideological Weapon of American Imperialism), by G. L. YEPISKOPSOV. Article appeared in Propagandist i agitator, no 6, 1954, of the Main Political Administration, Ministry of Defense USSR. (Krasnaya Zvezda, Moscow, 4 Apr 54)

SO: SUM 182, 13 August, 1954

PAVLOV, N.V., inzh.; BASKIN, M.A., inzh.; SOBOLEVSKIY, S.Yu., inzh.

Layout of an exposed BKZ 160-100^F boiler unit operating on
pulverized coal. Energomashinostroenie 7 no.4:35-37 Ap '61.
(MIRA 14:7)

(Boilers)

BASKIN, M.I.

Economic accountability of shifts at stations. Zhel.-dor.
transp. 41 no.9:72-73 8 '59. (NIRA 13:2)

1. Glavnyy inzhener stantsii Kurgan.
(Kurgan--Railroads--Accounts, bookkeeping, etc.)

BASKIN, L.M.

Feeding habits of the red deer. Zool. zhur. 44 no.3:465-469 '65.
(MIRA 18:8)

1. Moscow State University.

CHERNOBYL
AUTHOR: Baskin, M. L.

120-2-23/37

TITLE: A Cascaded Voltage Multiplier. (Kaskadnyy Umnozhitel' Napryazheniya.)

PERIODICAL: Priory i Tekhnika "Eksperimenta", 1957, No. 2, pp. 78 - 83 (USSR).

ABSTRACT: The methods of determining the parameters of cascaded voltage multipliers, as used for the last 20 years (Refs. 1 - 3) have several advantages, but at the same time do not give a clear enough picture of the influence of the internal branch resistances and lead sometimes to considerable design errors. These errors, depending on the design parameters, may exceed 100% as can be seen from a table compiled by Shvartsman (Ref. 4) and from the tables No. 2 produced by the author. The use of the old method does not allow for further improvements in the design of the apparatus. The author proposes, therefore, a new theory which would allow for improving the effective power and for the reduction of the internal resistance of the condenser-rectifier type of voltage multipliers. The theory is developed from the fact that for a given voltage and for given parameters the current at any point is a single-valued function of the load Card 1/3 current I, which determines the voltage drop at any of

A Cascaded Voltage Multiplier.

120-2-23/37

the circuit components. It is found that in multipliers the capacitative voltage drop is of main importance and it is shown that it is possible to compensate for it by producing a phase shift between voltage pulsation at different cascades. The theory also gives a general solution of the Pugno problem (Ref.1) of how to choose the parameters for any cascade in order to increase the overall potential proportionally to the number of cascades. Two forms of multipliers are considered (Fig.1). The theory has been experimentally confirmed on a low voltage installation having 5 $\frac{1}{2}$ cascades, with a maximum voltage of 300kV. The accuracy of readings has been checked against the energy of vacuum accelerated electrons, giving full agreement between theoretical and computed results, the mean square error being about 1%. Circuit diagrams of the two forms of voltage multipliers, the equivalent circuit of one cascade, two tables and a graph of the regulation of the experimental multipliers are given. There are 4 references, 1 of which is Slavic.

SUBMITTED: November, 16, 1956.

Card 2/3

A Cascaded Voltage Multiplier.

120-2-23/37

ASSOCIATION: The All-Union Scientific and Research Institute for
Hard Alloys. (Vsesoyuznyy Nauchno-Issledovatel'skiy
Institut Tverdykh Splavov.)

AVAILABLE: Library of Congress.

Card 3/3

BASKIN, M. L.

AUTHORS: Baskin, M. L., Semerchan, A. A.

30-1-11/39

TITLE: Growth and Cohesion of Crystals Under the Action of Ionizing Radiation (Rost i srushchivaniye kristallov pod vliyaniyem ioniziruyushchikh izlucheniye)

PERIODICAL: Vestnik AN SSSR, 1958, Vol. 28, Nr 1, pp. 69-70 (USSR)

ABSTRACT: As far back as in 1947 the authors observed a considerable increase of the velocity of crystal ionization under the action of ionizing radiation. In order to investigate this phenomenon they carried out tests with a stopped high-tension accelerator, and an aluminum foil of 12 - 15 μ thickness was used. In a comparatively short time holes formed in the foil, and it had to be replaced. A thorough investigation of this process showed that, under the action of electron radiation, crystals of aluminum oxide were formed from the aluminum and atmospheric oxygen, which were at first of microscopical dimensions, but which increased in size with being irradiated longer, and which grew together and then became separated from the foil. Tests carried out with thicker aluminum bodies gave the same results at the same conditions, as also tests carried out with other materials. The size of the crystals depended on

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Growth and Cohesion
of Ionizing Radiation

of Crystals Under the Action

30-1-11/39

the dose of irradiation. In a scheme the process of crystal production is shown and then discussed. This process can be utilized in various technical fields (for the production of inexpensive tools of high quality from aluminum oxide for metal working, etc.). There is 1 figure.

AVAILABLE:

Library of Congress

1. Electrons-Radiation 2. Crystals-Production

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BASKIN, M.L. (Moscow)

Physicochemical and quantitative analysis by means of electron absorption (method of known additions and varied emitters). Zhur. fiz. khim. 34 no.3:670-674 Nr 160.

(MIRA 13:11)

(Electrons) (Radiochemistry) (Chemistry, Analytical)

18.1247

1454

28879
S/180/61/000/004/017/020
E073/E535

AUTHORS: Baskin, M.L., Savin, A.V., Tumanov, V.I. and Eyduk, Yu.A. (Moscow)

TITLE: Mutual solubility of copper and molybdenum and certain properties of molybdenum-copper alloys

PERIODICAL: Izvestiya Akademii nauk SSSR. Otdeleniye tekhnicheskikh nauk, Metallurgiya i toplivo, 1961, No.4, pp.111-114

TEXT: Mo-Cu alloys are extensively used for electric contacts. The authors prepared alloys containing 1.5 to 14% Cu by means of current powder metallurgy methods. Sintering of molybdenum was carried out at 1700°C and the alloys of molybdenum with low contents of copper (1.5 to 10% by weight) were sintered at the same temperature. At lower temperatures, either no sintering took place at all or the material was very porous. The alloy with 14% Cu sintered at 1600°C. The porosity of the produced alloys (determined metallographically) was about 0.6 volume % and that of pure Mo was about 1 volume %. The grain size of the molybdenum phase was approximately the same for all the alloys and also for pure molybdenum, i.e. mainly 25-30 μ . To obtain grains

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Mutual solubility of copper ...

²⁸⁸⁷⁹
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of this size molybdenum had to be sintered for a duration almost twice as long as that of the alloys. The properties of the starting materials, Mo and Cu, were as follows: bulk density 1.60 and 1.49 g/cm³, respectively; adsorption of methanol vapours 0.200 and 0.026 mg/g, respectively. The average grain size of the starting powders, Mo and Cu, was 1 to 2 μ . To prevent contamination with iron, the powders were mixed in molybdenum lined mills. The specimens were sintered in molybdenum boats in resistance furnaces with an open molybdenum heater in a hydrogen atmosphere for a duration of one hour and the specimens of pure molybdenum for a duration of two hours. Heat treatment was as follows: heating in a hydrogen atmosphere to 950°C, holding at that temperature for 5 hours and quenching in oil at room temperature. Data on the Mo-Cu alloys are given in Table 2, the column headings from left to right being as follows: Cu, wt.%; specific weight ρ , g/cm³; electric resistance $\rho \times 10^2$ Ohm mm²/m; $\lambda \times 10^6$ 1/deg; phase composition, Mo - denoting Mo-base phase, Cu - denoting copper-base phase (To X/C - ditto); lattice parameter kX; Mo-base phase, Cu-base phase. The tabulated electric

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Mutual solubility of copper ...

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resistance values are averages from 36 measurements, whereby the maximum error was +2% and the deviations from the average value did not exceed 0.3%. The coefficient of linear expansion was determined by means of a dilatometer with quartz rods and indicator head in the temperature range 18 to 400°C, the error being within the limits of $\pm 2.5\%$. To determine the influence of admixtures which are important in the industrial manufacture of Mo-Cu alloys, a series of melts were produced containing admixtures of C, Si and SiO₂. Table 3 gives the obtained results for Mo-Cu alloys with 3, 5 and 8% Cu, respectively and the following admixtures in wt. %: 0.05% C, 0.05% Si, 0.10% Si, and 0.50% SiO₂ ($\rho \cdot 10^2$ Ohm mm²/m; a, kX). The influence of nickel (wt. %) on the electric resistance ($\rho \times 10^2$ Ohm mm²/m) of Mo-Cu alloys with 5% Cu was as follows: 0 - 7.10; 0.5 - 10.31; 1.0 - 12.94; 3.0 - 14.92; 5.0 - 15.29. L. G. Grigorenko, A. A. Maksimov and A. A. Cheredinov participated in the experimental work, L. Kh. Pivovarov carried out the X-ray structural analysis and M. N. Nalimova carried out the metallographic investigations. There are 3 figures, 4 tables and

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Mutual solubility of copper ...

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E073/E535

12 references: 4 Soviet and 8 non-Soviet. The English-language references read as follows: Ref.3, C. L. Sargent, J.Amer.Chem. Soc., 1900, v.22, p.783; Ref.7, M. Hansen, Constitution of binary alloys, second edition, New York - Toronto - London, 1958; Ref.12, W. P. Syks, R. Kent, van Horn and C. M. Tucker, Trans. AIME, 1935, v.117, p.173.

SUBMITTED: July 15, 1960

Table 3

Admixture, wt% Примесь, вес. %	3% Cu		5% Cu		8% Cu	
	$\frac{\rho \times 10^3}{\sigma \cdot M \cdot M^2}$ M	σ , kX	$\frac{\rho \times 10^3}{\sigma \cdot M \cdot M^2}$ M	σ , kX	$\frac{\rho \times 10^3}{\sigma \cdot M \cdot M^2}$ M	σ , kX
—	7.74	3.1397	7.10	3.1397	7.25	3.1397
0.05% C	8.55	3.1393	7.75	—	7.65	3.1395
0.05% Si	—	—	—	—	8.58	—
0.10% Si	—	—	—	—	9.61	—
0.50% SiO ₂	—	—	17.90	3.1375	17.40	—

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S/180/61/000/006/017/020
E073/E535

AUTHORS: Tumanov, V.I., Funke, V.F., Baskin, M.L. and
Novikova, T.A. (Moscow)

TITLE: Physical properties of the alloys tungsten carbide-
cobalt

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye
tekhnicheskikh nauk. Metallurgiya i toplivo.
No.6, 1961, 144-148

TEXT: Systematic data on the physical properties of WC-Co alloys have not been published and, therefore, the authors have investigated the specific resistance, the Young modulus, the coefficient of linear expansion and the hardness of WC-Co alloys containing various quantities of the binder phase with various sizes of the tungsten carbide grains. For the tests, specimens containing 0 to 100% Co and specimens containing 6 wt.% Co were investigated, differing as regards the size of the tungsten carbide grain. The alloys were produced according to standard technology. The main series of alloys with various contents of binder had a practically equal average diameter of the tungsten
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Physical properties of ...

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E073/E555

carbide grain of 2.5μ . The phase composition of the alloys throughout the entire range of changes of the Co content remained constant: phase WC plus solid solution of tungsten and carbon in cobalt. The porosity of the alloys did not exceed 0.2 vol.%, the tungsten carbide had a porosity of 3.5%. The sintered specimens were quenched and annealed; the quenching consisted of heating in a hydrogen atmosphere at 1000°C for 12 hours and cooling in the water-cooled cooler of the furnace. The annealing was at 1000°C for 12 hours in a hydrogen atmosphere followed by cooling to 800°C and holding at that temperature for 24 hours and then cooling to room temperature at an average rate of $1.5^{\circ}\text{C}/\text{min}$. The specific resistance ρ , the modulus of elasticity E , the coefficient of linear expansion α and the hardness H_v were determined on quenched and annealed specimens. The specific electric resistance was determined by the compensation method using a potentiometer, the maximum error being 2.0%; the coefficient of linear expansion was determined with a quartz rod dilatometer in the range 18 to 420°C with an error of 2.5%; the Young modulus was determined by a dynamic method with

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Physical properties of ...

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E073/E535

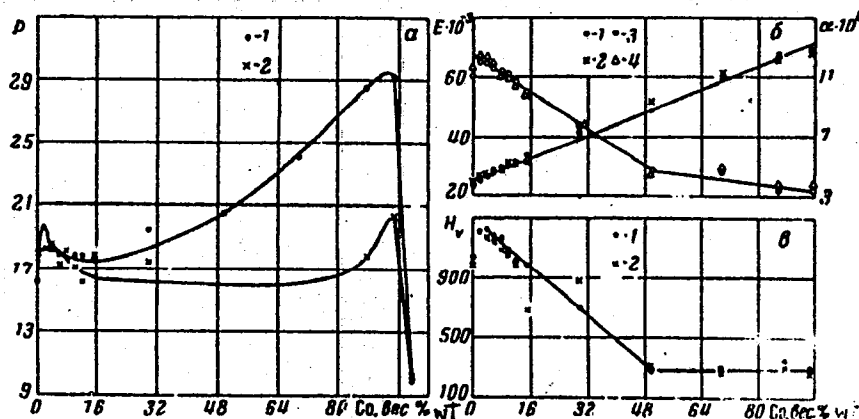
an error of 1%. Fig.1 shows the dependence on the cobalt content, wt.% of the following: specific resistance ρ , $\mu\text{ohm}\cdot\text{cm}$ (a); modulus of elasticity E , kg/mm^2 and the coefficient of linear expansion α , $1/\text{deg}$ (b); hardness H_v , kg/mm^2 (c). Curves 1 and 3 - after quenching, curves 2 and 4 - after annealing. The obtained experimental results show that the specific electric resistance is the most sensitive physical characteristic of WC-Co alloys which provides an indication of the state and the composition of the binding and the carbide phases and of the structure. The modulus of elasticity and the coefficient of linear expansion indicate predominantly the quantitative relations between the tungsten carbide and the cobalt in the alloy and depend little on heat treatment and composition of the binding phase. The modulus of elasticity changes considerably with the grain size of the tungsten carbide. The results confirm the view of the existence of a continuous cobalt phase in alloys of this type. L. G. Grigorenko and A. A. Cheredinov participated in the experiments. There are 2 figures and 4 references: 2 Soviet-bloc and 2 non-Soviet-bloc. The English-language references read as follows: Ref.1: Dawidl W. and Hinnuber J. The structure of hard metal alloys. Kolloid-Z., Card 3/4

Physical properties of ...

S/180/61/000/006/017/020
E073/E535

1943, 104, No.2/3, 233; Ref.2: Gurland J. and Norton J. Role of the binder phase in cemented tungsten carbide-cobalt alloys. Metals, 1952, 4, No.10, 1051.

SUBMITTED: June 18, 1961



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Fig.1

152600 3209 3309

31740
S/136/61/000/012/004/006
E193/E383

AUTHORS: Tumanov, V.I., Baskin, M.L. and Anders, N.R.

TITLE: Some properties of cobalt-bonded tungsten carbides

PERIODICAL: Tsvetnyye metally, no. 12, 1961, 68 - 73

TEXT: Cemented carbides are used in increasing quantities as materials of construction and this prompted the authors to undertake the present investigation, whose object was to determine the Young modulus, E , electrical resistivity, ρ , and linear coefficient of thermal expansion, α , of WC-Co alloys in relation to their composition and structure. The composition of experimental alloys is included in Table 1. The results of measurements are reproduced graphically in Figs. 1-3, where the curves marked M, C and B relate to specimens with the average grain size 1.2 - 1.5 μ , 1.5 - 2.5 μ and 3.4 - 5.0 μ , respectively. In Fig. 1,

E (kg/mm^2) is plotted against the Co content (wt.%) in the alloy. The concentration dependence of α ($10^{-6}/^\circ\text{C}$) and

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Some properties of

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ρ ($\Omega \text{ mm}^2/\text{m}$) is similarly represented in Figs. 2 and 3. The general conclusion reached was that E , α and ρ depend not only on the composition (Co content) but also on the grain size of cemented carbides, the maximum value of each of these properties being attained in finely-crystalline materials. There are 3 figures, 5 tables and 17 references: 7 Soviet-bloc and 10 non-Soviet-bloc. The four latest English-language references mentioned are: Ref. 6 - A.G. Johnson - Technical Note 3309. Nst. Advisory Committee on Aeronautics, Washington, D.C.D, CC 1954; Ref. 7 - E. Lardner, Mc.J. Gregor. Inst. of Metals, 1952, no. 80, 369; Ref. 8 - Felgar. Lubahn, American Society for Testing Materials, 1957, v.57; Ref. 9 - W.W.Wellborn, Mater. Design Engns., 1959, v.49, no. 2, 79. L.G. Grigorenko and A.A. Cheredinov participated in the work.

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Марка сплава Alloy type	Химический состав в %					Свойства			
	(5) Содж	(6) С _с	(7) С	(8) О	(9) Fe	(10) Уд. вес. г/см ³	(11) Прочность кг/мм ²	(12) Твердость HRA	(13) Корроз. устойчивость мм/год
Группа									
BK3M	5.77	0.05	3.16	0.37	0.11	15.03	116	—	264
BK6M	5.96	0.10	5.95	0.39	0.10	14.86	132	90.5	243
BK10M	—	—	9.93	0.44	0.10	14.53	200	90.5	194
BK15M	5.11	0.06	15.15	0.42	—	13.91	192	88.2	129
BK20M	—	—	19.81	0.37	0.04	13.60	204	86.5	99
BK6A	5.60	0.03	5.80	0.37	—	14.92	122	90.7	172
Группа									
BK4	5.79	0.05	4.01	0.35	0.12	15.07	153	90.2	146
BK6	5.78	0.06	6.04	0.38	—	14.85	152	90.9	168
BK8	5.65	0.05	7.86	0.38	—	14.65	198	89.9	140
BK15	5.22	0.04	14.73	0.41	—	14.02	212	87.9	103
BK20	4.92	0.05	19.81	0.42	0.11	13.54	218	87.0	87
BK30	4.30	0.05	30.20	0.37	0.14	12.67	226	85.0	63
Группа к									
BK4B	5.86	0.07	4.20	—	0.15	14.99	155	89.7	88
BK6B	5.78	0.12	6.00	—	0.20	14.81	158	88.5	80
BK8B	5.70	0.08	8.26	0.38	0.09	14.52	162	86.7	66
BK11B	5.44	0.11	11.06	0.39	0.30	14.39	175	86.7	55

Card3/6

Some properties of ...
Table 1:
S/136/61/000/012/004/006
E193/E383

Микроструктура (3)

31740

(11) поверхность, %	(12) наклонная размер отделе- ния до 0,4	(13) графит, выявления, %	(14) величина зерен фазы WC в μ и объемное содержание, %							
			1	2	3	4-5	6-7	8-10	11-15	16-20

мелкозернистых сплавов (14)

До 0,2	—	Нет	62	30	8	0	0	0	0	0	0
До 0,2	—	0,5	69	22	9	0	0	0	0	0	0
До 0,2	—	Нет	84	16	0	0	0	0	0	0	0
До 0,2	—	Нет	56	31	11	1	1	0	0	0	0
До 0,2	—	Нет	65	30	3	2	0	0	0	0	0
0,2	5-10	0,5	46	40	11	1	1	1	0	0	0

среднезернистых сплавов (15)

До 0,2	—	До 1,0	43	36	21	0	0	0	0	0	0
До 0,2	10	Нет	53	40	6	0	1	0	0	0	0
До 0,2	5-10	Нет	45	43	9	2	1	0	0	0	0
До 0,2	—	0,5	57	32	9	2	0	0	0	0	0
До 0,2	5-10	Нет	46	43	10	1	0	0	0	0	0
До 0,2	—	Нет	34	31	19	8	5	3	0	0	0

крупнозернистых сплавов (16)

0,2	5-10	До 0,5	2	29	26	27	11	4	1	0	0
До 0,2	15	Нет	4	22	25	33	9	4	3	0	0
До 0,2	—	0,5	1	20	21	28	16	7	5	1	1
До 0,2	—	Нет	0	13	27	26	14	10	8	2	0

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Some prop-
erties of ...
Table 1 (cont.):
S/136/61/000/012/004/006
E193/E383

Some properties of

31740
S/136/61/000/012/004/006
E193/E383

Table 1: Composition, physicommechanical properties and micro-structure of tungsten-cobalt alloys studied in the present investigation

Key: 1 - Chemical composition, %; 2 - Properties;
3 - Microstructure; 4 - Volume percentage of
WC particles of the sizes (μ)...
5 - total carbon; 6 - combined carbon;
7 - specific gravity, g/cm³; 8 - strength,
kg/mm²; 9 - hardness, H_{RA}; 10 - Coercive
force, Oe; 11 - Porosity, %; 12 - Maximum
size of individual pores, μ ; 13 - Graphite
inclusions, %; 14 - Fine-grain alloys;
15 - Average grain-size alloys; 16 - Coarse-
grain alloys.

* The remainder is tungsten and additions of other elements,
(Si, Al, etc.)

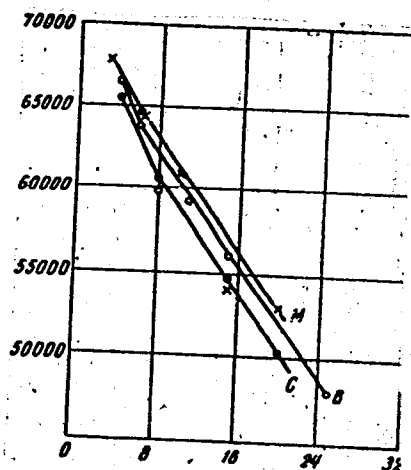
** Dashes indicate that the pore dimensions are less than 5 μ .

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Some properties of

31740
S/136/61/000/012/004/006
E193/E383

Fig. 1:



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Fig. 2:

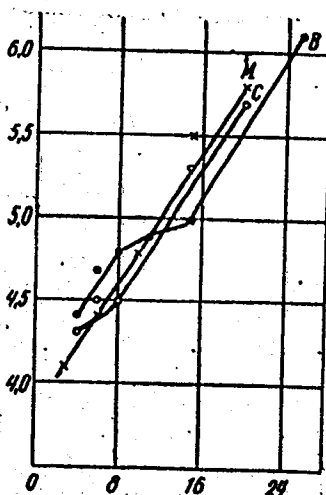
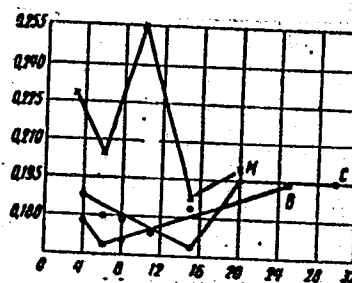


Fig. 3:



15 2410
15 2240

33452

S/126/61/012/006/009/023
E193/E383

AUTHORS: Baskin, M.L., Tret'yakov, V.I. and Chaporova, I.N.
TITLE: Diffusion of niobium in titanium carbide and in the TiC-NbC solid solution of equimolecular composition
PERIODICAL: Fizika metallov i metallovedeniye, v.12, no. 6, 1961, 860 - 864
TEXT: The object of the present investigation was to obtain data on diffusion of Nb in titanium carbide and in the TiC-NbC alloy, indispensable in solving the problems arising in studies of processes taking place during the preparation of so-called complex carbides. To facilitate sintering of TiC specimens, 0.25% Ni was added to the powder mixture, the Ni binder volatilizing completely during subsequent sintering. Sintering of both TiC and TiC-NbC specimens (15 mm diameter, 5 mm thick) was carried out in vacuum in two stages: slow heating (10 °C/min) to about 1 930 °C, followed by 2.5 hours at 2 300 °C (a high sintering temperature was used to ensure that no grain growth would occur during the subsequent diffusion anneals carried out at temperatures below 2 300 °C. The properties of Card 1/ 3

Diffusion of niobium

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sintered compacts are given in Table 2. The method employed for determination of the diffusion coefficients, D , entailed deposition of thin, radioactive Nb^{95} films on one side of polished specimens, and measuring the counting rates on the opposite side as a function of time at the test (diffusion annealing) temperature. The results (average of four measurements) for the diffusion of Nb in TiC are given in Table 3, those for diffusion of Nb in TiC-NbC alloy being given in Table 4. The variation of D in the former and latter cases can be described by:

$$D = 2.4 \exp\left(-\frac{84\,000}{RT}\right) \text{ cm}^2/\text{sec} \quad (4)$$

and:

$$D = 4.7 \times 10^2 \exp\left(-\frac{120\,000}{Rt}\right) \quad (5)$$

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Diffusion of niobium

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the two values of 84 000 and 120 000 representing the activation energies (cal/mole) for the respective processes. The results obtained showed that addition of NbC to TiC decreases considerably the rate of diffusion of Nb, which indicates that the atomic-bond forces in the TiC-NbC solid solution are higher than those in TiC. Acknowledgments are expressed to L.G. Grigorenko and N.S. Anikina, technicians. There are 3 figures, 4 tables and 7 references: 6 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov (All-Union Scientific Research Institute of Hard Alloys)

SUBMITTED: January 24, 1961

Card 3/3

21.2400

41520

S/126/62/014/003/011/022
E202/E492

AUTHORS: Baskin, M.L., Tret'yakov, V.I., Chaporova, I.N.

TITLE: Diffusion of tungsten in monocarbides of tungsten
tantalum, titanium, and in solid solutions of
TiWC and TiWCTaC

PERIODICAL: Fizika metallov i metallovedeniye, v.14, no.3, 1962,
422-427

TEXT: Diffusion coefficients of tungsten (D), and activation
energies (Q), during the diffusion of W in TiC, WC, TaC and in
solid solutions comprising: 93% TiC + 7% WC; 77% TiC + 23% WC;
59% TiC + 34% WC + 7% TaC and 48% TiC + 37% WC + 15% TaC
(all % mol), were determined. A method of introducing and
anchoring on the surface of the sample radioactive tungsten was
developed. Considerable difficulties were experienced in
compacting and high temperature diffusional annealing. Chemical
composition including combined and free and the stoichiometric
C content, lattice parameter of the original constituents and
their origin were given as well as the details of the compacts.
The latter included specific gravity, lattice parameter, porosity,
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Diffusion of tungsten ...

S/126/62/014/003/011/022
E202/E492

grain size and Ni content (spectrometrically). L. Foster's method (J. Amer. Ceramic Soc., v.33, no.1, 1950, 27) of compacting was used throughout. D values for the diffusional annealing at 2130, 2170, 2230 and 2300°C were determined for all the above compositions and the Q and D₀ values calculated therefrom. It was found that TiC had the lowest Q (115 ± 8 kcal/mol) while 50% TiC + 34% WC + 7% TaC had the highest (225 ± 27 kcal/mol). Addition of TaC to the solid solution of TiWC substantially increased Q. Certain compositions of TiWC and TiWCTaC showed maximum values of Q. The presence of these maxima were explained by the energy levels and the incomplete 3d shell in titanium. There are 4 tables.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut
tverdykh splavov (All Union Scientific Research
Institute of Hard Alloys)

SUBMITTED: December 26, 1961

Card 2/2

L 14284-63

BWP(q)/BWT(m)/BDS AFPTG/ASD JD/HW-2/JG

ACCESSION NR: AP3002856

8/0126/63/015/006/0941/0043 64
63

AUTHOR: Semerchan, A. A.; Baskin, M. L.; Pivovarov, L. Kh.

TITLE: Effect of high pressure and elevated temperature on hard alloy T15K6

SOURCE: Fizika metallov i metallovedeniye, v. 15, no. 6, 1963, 942-943

TOPIC TAGS: T15K6 hard alloy, T15K6 alloy composition, T15K6 alloy phase composition, T15K6 alloy hydrostatic compression, T15K6 alloy high-temperature hydrostatic compression, high hydrostatic pressure

ABSTRACT: The effects of high hydrostatic pressure (up to 100,000 kg/cm²) and temperature (up to 1400C) on the W-base alloy T15K6 (12.5% Ti, 7.5% C, 6% Co, 0.1% Fe) were studied. The structure of the alloy consisted of three phases: WC carbide; a TiC-WC solid solution containing 68% WC; and a Co phase, a solid solution of small quantities of W (up to 3%), Ti (up to 0.5%), and C (up to 0.5%) in Co. Cylindrical specimens 6 mm in diameter and 8 mm long were subjected to a pressure of 100,000 kg/cm² and temperature of 1400C for 5 min and then cooled at the rate of 15C/min. Microscopic examination revealed no changes in porosity (up to 0.2%), graphite content (up to 0.5%) or grain size of WC (3.46 μ) and TiC-WC (3.60 μ). Many micro- and macrocracks were found in most

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L 11284-53

ACCESSION NO: APJ002836

specimens. The average specific gravity, 11.25 g/cm^3 , increased to 11.48 g/cm^3 in specimens with few cracks. The Vickers hardness decreased from 1480 kg/mm^2 to 1100 kg/mm^2 . X-ray diffraction patterns revealed that the lattice parameter of the TiC-WC phase decreased from 4.3119 to $4.3105 \text{ \AA}$ and that the diffraction lines of both carbide phases broadened. The decrease of the lattice parameter is explained by additional dissolution (up to 5%) of WC in the TiC-WC phase; the broadening of diffraction lines, by an increase of microstresses and block fragmentation. Orig. art. has: 1 table.

ASSOCIATION: Institut fiziki vysshikh davleniy AN SSSR (Institute of Physics of High Pressures, AN SSSR)

SUBMITTED: 09Nov62

DATE ACQ: 23Jul63

ENCL: 00

SUB CODE: NL

ED REP SOV: 003

OTHER: 000

Card 2/2

L 18077-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD/HW/JG
 ACCESSION NR: AP3004600 S/0126/63/016/001/0113/0116

AUTHORS: Baskin, M. L.; Tumanov, V. I.; Funke, V. F.

TITLE: Modulus of elasticity for alloys: tungsten carbide-cobalt

SOURCE: Fizika metallov i metallovedeniye, v. 16, no. 1, 1963, 113-116

TOPIC TAGS: tungsten carbide-cobalt, alloy, modulus of elasticity

ABSTRACT: An attempt is made to determine the relation of WC-Co elastic properties to their composition and structure. A formula is offered which expresses the relation of Young's modulus E to the Co content. Three structural variants are discussed, and the formulas for E in each variant are offered. 1) The phases are distributed in layers parallel to the main sample axis;

$$E_0 = E_2 + (E_1 - E_2)c_1.$$

2) The phases are distributed in layers perpendicular to the axis;

$$E_0 = E_2[1 - c_1(1 - E_1/E_2)].$$

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ACCESSION NR: AP3004600

3) The matrix distribution of phases: a) cobalt matrix with disseminated WC grains

$$E_s = E_1 : [1 - c_1(E_1 - E_2) : E_n],$$

$$E_n = E_2 + (E_1 - E_2) \cdot c_1^{1/2}.$$

b) carbide matrix with disseminated Co grains;

$$E_s = E_1 : [1 + c_1(E_1 - E_2) : E_n],$$

$$E_n = E_1 - (E_1 - E_2) c_1^{1/2}.$$

In these formulas E_n , E_1 and E_2 , etc., are the elasticity moduli of the variants and c_1 is volumetric concentration of tungsten carbide. [Abstracter's note: c_2 is not explained]. The results thus obtained confirm the previous deductions pertaining to the WC-Co structure. These deductions were based on the relation of electrical

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L 18077-63

ACCESSION NR: AP3004600

resistivity as well as on the physical and mechanical properties of these alloys to their content of Co. Orig. art.has: 6 formulas and 3 figures.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov
(All-Union Scientific Research Institute of Hard Alloys)

SUBMITTED: 19Apr62

DATE ACQ: 27Aug63

ENCL: 00

SUB CODE: ML

NO REF SOV: 009

OTHER: 005

Card 3/3

BASKIN, M.L.; TUMANOV, V.I.

Device for measuring specific electric resistance. Zav.lab. 29
no.4:508-509 '63. (MIRA 16:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov.
(Electric resistance—Measurement)

BASKIN, M.L.; TRET'YAKOV, V.I.; CHAPOROVA, I.N.

Niobium diffusion in titanium carbide in a solid solution of TiC-NbC of equimolar composition. Fiz. met. i metalloved. 12 no.6: 860-864 D '61. (MIRA 16:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut tverdykh splavov.

ACCESSION NR: AP4019817

S/0279/64/000/001/0170/0175

AUTHORS: Tumanov, V. I. (Moscow); Funke, V. F. (Moscow); Baskin, M. L. (Moscow); Novikova, T. A. (Moscow)

TITLE: Temperature effect on physical properties of tungsten carbide and cobalt alloys

SOURCE: AN SSSR. Izv. Metallurgiya i gornoye delo, no. 1, 1964, 170-175

TOPIC TAGS: cermet alloy, metalloceramic solid alloy, WC+Co alloy, WC+Co physical properties, WC grain size, WC+Co thermal expansion, WC + Co electrical resistivity

ABSTRACT: This work was carried out in order to determine the variation in the elasticity modulus, linear expansion coefficient, and specific electrical resistivity of WC+Co with respect to the temperature changes (800-1000C), the cobalt content, and the grain size of the WC-phase. The samples consisted of two sets: 1) the alloys containing 0-50 wt% of Co and made up of equal WC-phase grains (2.9-2.6 μ); 2) the alloys with a constant Co content (6%) and with varied grain sizes of the WC-phase (1.7-3.7 μ). The results are shown on Figures 1, 2 and 3 of the

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